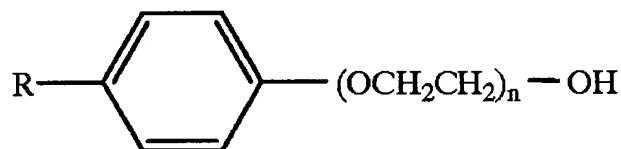


CLAIMS

What is claimed is:

1. A method of producing an organic compound in a solvent minimized environment which comprises bringing at least one organic reactant into contact with  
 5 at least one inorganic metal reagent and in the presence of a catalytic amount of an oxyethylene ether for a time sufficient for the oxyethylene ether to at least partially complex the metal of the at least one inorganic or organic metal reagent.

2. The method of Claim 1, wherein the oxyethylene ether is a  
 10 polyethylene glycol or an aryl polyoxyethylene ether of the formula:



wherein R is an aryl, alkyl or aralkyl group having from 1 to 20 carbon atoms and n has an average value between from about 9 to about 150.

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3. The method of Claim 2, wherein n has an average value between from about 9 to about 70.

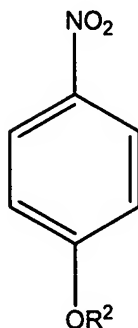
4. The method of Claim 3, wherein n has an average value between from  
 20 about 16 to about 40.

5. The method of Claim 2, wherein n is 9 to 10.

6. The method of Claim 4, wherein n is 40.

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7. The method of Claim 1, wherein the at least one organic reactant is a compound of the formula:



(II)

wherein  $R^2$  is  $-H$  or a  $C_1$ - $C_4$  alkyl group and the at least one inorganic metal reagent is an alkali metal thioacetate.

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8. The method of Claim 7, wherein  $n$  is approximately 9.

9. The method of Claim 2, wherein the at least one organic reactant is a  $C_1$ - $C_{20}$  nitro-alkane, optionally substituted with at an aromatic ring, and a  $C_1$ - $C_{20}$  alkyl or aromatic aldehyde and the at least one inorganic metal reagent is selected from an alkali or alkaline earth hydroxide or a tetraalkyl ammonium hydroxide.

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10. The method of Claim 9, wherein the  $C_1$ - $C_{20}$  nitroalkane is 1-nitropropane and the aldehyde is propionaldehyde.

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11. The method of Claim 10, wherein the alkali hydroxide or tetraalkyl ammonium hydroxide is selected from sodium hydroxide, cesium hydroxide, potassium hydroxide, lithium hydroxide or tetrabutyl ammonium hydroxide.

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12. The method of Claim 11, wherein the at least one inorganic metal reactant is selected from potassium hydroxide or cesium hydroxide.

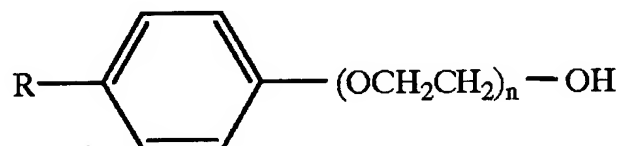
13. The method of Claim 9, wherein  $n$  is approximately 9.

14. A method of producing a nitroalcohol in a solvent minimized environment which comprises contacting a C<sub>1</sub>-C<sub>20</sub> nitroalkane, optionally substituted with an aromatic group, and a C<sub>1</sub>-C<sub>20</sub> aliphatic or aromatic aldehyde, in the presence of a catalytic amount of a catalyst system comprising

- 5 (i.) an oxyethylene ether; and  
 (ii.) at least one hydroxide

for a time sufficient to form the nitroalcohol.

15. The method of Claim 14, wherein the oxyethylene ether is a  
 10 polyethylene glycol or an aryl polyoxyethylene ether of the formula:



wherein R is an aryl, alkyl or aralkyl group having from 1 to 20 carbon atoms and n has an average value between from about 9 to about 150.

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16. The method of Claim 14, wherein the C<sub>1</sub>-C<sub>20</sub> nitroalkane is 1-nitropropane.

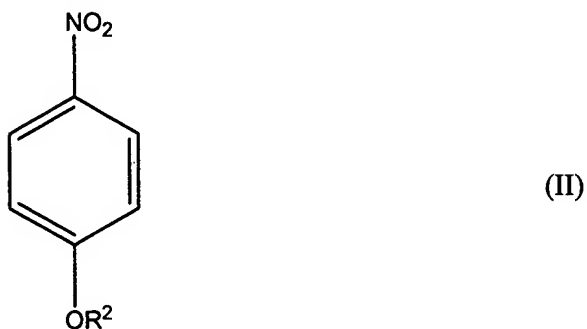
17. The method of Claim 14, wherein the C<sub>1</sub>-C<sub>20</sub> aldehyde is  
 20 propionaldehyde.

18. The method of Claim 14, wherein the hydroxide is sodium hydroxide, cesium hydroxide, potassium hydroxide, lithium hydroxide or tetralkyl ammonium hydroxide or a tetralkylammonium hydroxide potassium hydroxide.

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19. The method of Claim 18, wherein n is approximately 9 to 10.

20. A method of producing N-acetyl-p-aminophenol in a solvent minimized environment, which comprises contacting a compound of the formula:



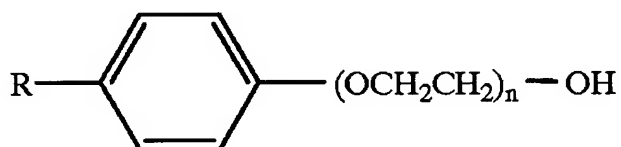
wherein R<sup>2</sup> is -H or a C<sub>1</sub>-C<sub>4</sub> alkyl group

5 with a catalytic amount of a catalyst system comprising

- (i.) an oxyethylene ether; and
- (ii.) alkali metal thioacetate

for a time sufficient to form N-acetyl-p-aminophenol.

10 21. The method of Claim 20, wherein the oxyethylene ether is a polyethylene glycol or an aryl polyoxyethylene ether of the formula:



15 wherein R is an aryl, alkyl or aralkyl group having from 1 to 20 carbon atoms and n has an average value between from about 9 to about 150.

22. The method of Claim 20, wherein the R<sup>2</sup> is -H.

23. The method of Claim 22, wherein the equivalent weight ratio of the compound of formula (II):alkali metal thioacetate is approximately 1:1.

24. The method of Claim 20, wherein  $R^2$  is a  $C_1$ - $C_4$  alkyl group.

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25. The method of Claim 24, wherein the equivalent weight ratio of the compound of formula (II): alkali metal thioacetate is approximately 1:3.

26. The method of Claim 20, wherein the alkali thioacetate is potassium  
10 thioacetate.

27. The method of Claim 15, wherein n is about 40 to 41.